UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/081,525	02/21/2002	Michael J. Wissner	16319-05906	1035

				EXAMINER
758	7590	02/15/2005		WASSUM, LUKE S

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ART UNIT	PAPER NUMBER
2167	

DATE MAILED: 02/15/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

	Application No.	Applicant(s)
Office Action Summary	10/081,525	WISSNER ET AL.
	Examiner	**Art Unit**	
	Luke S. Wassum	2167	

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>22 October 2004</u>.

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-42</u> is/are pending in the application.

   4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-42</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on <u>21 February 2002</u> is/are: a)☒ accepted or b)☐ objected to by the Examiner.

   Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

   Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

   a)☐ All   b)☐ Some * c)☐ None of:

   1.☐ Certified copies of the priority documents have been received.

   2.☐ Certified copies of the priority documents have been received in Application No. _____.

   3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
   application from the International Bureau (PCT Rule 17.2(a)).

   * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
   Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
   Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

Response to Amendment

1.   The Applicants' amendment, filed 22 October 2004, has been received, entered into the record, and considered.

2.   As a result of the amendment, claims 1, 2, 4-6, 11, 12, 14, 23, 30, 37, 41 and 42 have been amended. Claims 1-42 remain pending in the application.

The Invention

3.   The claimed invention is a database management system including request handler modules, a master control module and a plurality of database servers. The master control module assigns database servers to databases and matches client database requests (relayed from request handler modules) to the database server which has been assigned the requested database, while the request handler modules receive requests from clients and after receiving database server information from the master control module, passes the request to the database server assigned to the desired database.

Specification

4.   In view of the amendment to the specification, the examiner withdraws the pending objection to the specification.

Claim Objections

5.   In view of the amendment to claim 41, the examiner withdraws the pending objection to

claim 41.

Claim Rejections - 35 USC § 112

6.   In view of the Applicants' amendment to the claims, the examiner withdraws all pending

claim rejections under 35 U.S.C. § 112.

Claim Rejections - 35 USC § 102

7.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the

basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8.   Claims 1, 4, 9-11, 14, 16, 20-24, 27-31, 34-37 and 41 are rejected under 35 U.S.C. 102(b) as

being anticipated by **Rierden et al.** (U.S. Patent 5,978,577).

9.   Regarding claim 1, **Rierden et al.** teaches a computer implemented method for handling

database requests for client systems over a network as claimed, the method comprising:

> a) receiving from a client a database request via a request handler (see col. 6, lines 7-15; see
>
>   also col. 9, lines 13-25);

b) determining an assigned database server for handling the database request from a group

of available database servers (see col. 6, lines 7-15; see also col. 9, lines 13-25);

c) prompting the assigned database server to load a database corresponding to the database

request (see col. 7, line 61 through col. 8, line 19, the claimed prompting being

inherent in the disclosed system, since a database request cannot be serviced without

first loading the database containing the requested data); and

d) providing information regarding the assigned database server to the request handler to

allow the request handler to provide the database request to the assigned database

server for handling the database request (see col. 28, lines 47-51).

10.   Regarding claim 11, **Rierden et al.** teaches a system for handling database requests for client

systems over a network as claimed, the system comprising:

a) a request handling module which receives from a client a database request (see col. 6, lines

7-15; see also col. 9, lines 13-25);

b) a plurality of database servers which receive and handle database requests (see database

servers A, B, C and M 160 in Figure 1; see also col. 4, line 65 through col. 5, line 8);

and

c) a master control module in communication with the request handling module and the

plurality of databases, which receives the database request, determines an assigned

database server from the plurality of database servers for handling the database

request, prompts the assigned database server to load a database corresponding to the

database request and provides information regarding the assigned database server to

the request handler to allow the request handler to provide the database request to the

assigned database server (see col. 6, lines 7-15; see also col. 9, lines 13-25; see also col.

7, line 61 through col. 8, line 19, the claimed prompting being inherent in the

disclosed system, since a database request cannot be serviced without first loading the

database containing the requested data; see also col. 28, lines 47-51, disclosing

information being provided to the request handler).

11.   Regarding claim 21, **Rierden et al.** teaches a method for handling database requests for

client systems over a network as claimed, the method comprising:

      a) communicating with a plurality of database servers that receive and handle database

          requests (see col. 6, lines 7-15; see also col. 9, lines 13-25);

      b) assigning databases to the database servers, including an assignment of a previously

          existing database to an assigned database server selected from the plurality of database

          servers (see col. 12, line 28 through col. 15, line 38);

      c) receiving a set of information about a database request from a request handler (see col. 6,

          lines 7-15; see also col. 9, lines 13-25; see also col. 28, lines 47-51);

      d) determining from the set of information that the assigned database server corresponds to

          the database request (see col. 6, lines 7-15; see also col. 9, lines 13-25); and

      e) sending an identification of the assigned database server to the request handler (see col.

          28, lines 47-51).

12.   Regarding claim 28, **Rierden et al.** teaches an apparatus for handling database requests for

client systems over a network as claimed, the apparatus comprising:

> a) a database server managing module, for communicating with a plurality of database
>
> servers that receive and handle database requests, assigning databases to the database
>
> servers, including an assignment of a previously existing database to an assigned
>
> database server selected from the plurality of database servers, and determining that
>
> an assigned database server corresponds to a database by examining a set of
>
> information about the database request (see col. 6, lines 7-15; see also col. 9, lines 13-
>
> 25; see also col. 12, line 28 through col. 15, line 38; see also col. 28, lines 47-51); and
>
> b) a request handler communications module for receiving the set of information about the
>
> database request from a request handler, and sending an identification of the assigned
>
> database server to the request handler (see col. 28, lines 47-51).

13.   Regarding claim 35, **Rierden et al.** teaches a computer program product for handling

database requests for client systems over a network as claimed, the computer program product

stored on a computer readable medium and adapted to perform operations comprising:

> a) communicating with a plurality of database servers that receive and handle database
>
> requests (see col. 6, lines 7-15; see also col. 9, lines 13-25);
>
> b) assigning databases to the database servers, including an assignment of a previously
>
> existing database to an assigned database server selected from the plurality of database
>
> servers (see col. 12, line 28 through col. 15, line 38);

      c) receiving a set of information about a database request from a request handler (see col. 6,

          lines 7-15; see also col. 9, lines 13-25; see also col. 28, lines 47-51);

      d) determining from the set of information that the assigned database server corresponds to

          the database request (see col. 6, lines 7-15; see also col. 9, lines 13-25); and

      e) sending an identification of the assigned database server to the request handler (see col.

          28, lines 47-51).

14.   Regarding claims 4, 14, 23, 30 and 37, **Rierden et al.** additionally teaches a method, system,

apparatus and computer program product wherein determining the assigned database server for

handling the database request from the group of available database servers further comprises

responsive to determining that there is no database server assigned to handle the database request,

assigning a selected database server from the group of available database servers as the assigned

database server, and updating a mapping of previously created databases to their respective database

servers to include the assignment of the selected database server to the database (see col. 15, lines

27-38).

15.   Regarding claims 9, 20, 27, 34 and 41, **Rierden et al.** additionally teaches a method, system,

apparatus and computer program product further comprising assigning the database request to an

alternative database server selected from a group of available database servers based upon a

comparison of a first expected load on the assigned database and a second expected load on the

alternative database server (see col. 9, lines 1-6).

16.   Regarding claims 10, 16, 24, 31 and 38, **Rierden et al.** additionally teaches a method, system, apparatus and computer program product further comprising assigning the database request to an alternative database server selected from a group of available database servers and providing the database request to the alternative database server for handling the database request (see col. 6, lines 29-32; see also col. 9, lines 18-22).

17.   Regarding claims 22, 29 and 36, **Rierden et al.** additionally teaches a method, apparatus and computer program product wherein the set of information about the database request includes a database identifier for the previously existing database, and the database identifier is used to determine that the previously existing database corresponds to the assigned database server (see disclosure that the X-Ref Servers contain information for determining where specific data resides in the system, necessitating the use of a database identifier, col. 8, lines 30-39).

Claim Rejections - 35 USC § 103

18.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

19.   The factual inquiries set forth in *Graham* v. *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

       1.   Determining the scope and contents of the prior art.

       2.   Ascertaining the differences between the prior art and the claims at issue.

       3.   Resolving the level of ordinary skill in the pertinent art.

       4.   Considering objective evidence present in the application indicating obviousness or nonobviousness.

20.   This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

21.   Claims 7, 8, 18, 19, 25, 26, 32, 33, 39 and 40 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Rierden et al.** (U.S. Patent 5,978,577) as applied to claims 1, 4, 9-11, 14, 16, 20-24, 27-31, 34-37 and 41 above, and further in view of **D'Souza** (U.S. Patent 6,453,468).

22.   Regarding claims 7, 8, 18, 19, 25, 26, 32, 33, 39 and 40, **Rierden et al.** teaches a method, system, apparatus and computer program product substantially as claimed.

       Rierden et al. does not teach a method, system, apparatus and computer program product wherein an alternative database is chosen on the basis of the geographic location of request making clients.

D'Souza, however, teaches a method, system, apparatus and computer program product wherein an alternative database is chosen on the basis of the geographic location of request making clients (see col. 18, lines 26-35).

It would have been obvious to one of ordinary skill in the art at the time of the invention to choose an alternative database based on the geographic location of request making clients, since in general, it is desired that transaction requests originated from a given locality be services by servers that are closest to the place of origin (see col. 18, lines 32-35).

23.   Claims 5, 6, 15, 17 and 42 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Rierden et al.** (U.S. Patent 5,978,577) as applied to claims 1, 4, 9-11, 14, 16, 20-24, 27-31, 34-37 and 41 above, and further in view of **Lin** (U.S. Patent 6,298,451).

24.   Regarding claims 5, 6, 15, 17 and 42, **Rierden et al.** teaches a method, system, apparatus and computer program product substantially as claimed.

Rierden et al. does not teach a method, system, apparatus and computer program product wherein upon the expiration of a timeout/failure in handling a database request, an alternate database server is utilized in satisfying a database request.

Lin, however, teaches a method, system, apparatus and computer program product wherein upon the expiration of a timeout/failure in handling a database request, an alternate database server is utilized in satisfying a database request (see col. 6, lines 15-39).

It would have been obvious to one of ordinary skill in the art at the time of the invention to utilize a secondary database server in the case of the failure of a primary database server, since this would allow a database request to be satisfied, even if the server assigned to carry out the request fails.

25.   Claims 2, 3, 12 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rierden et al. (U.S. Patent 5,978,577) as applied to claims 1, 4, 9-11, 14, 16, 20-24, 27-31, 34-37 and 41 above, and further in view of Wu et al. (U.S. Patent 6,125,369).

26.   Regarding claims 2 and 12, Rierden et al. teaches a method and system substantially as claimed.

Rierden et al. does not explicitly teach a method and system wherein the database request is a database creation request.

Wu et al., however, teaches a method and system wherein the database request is a database creation request (see col. 17, line 63 through col. 18, line 8).

It would have been obvious to one of ordinary skill in the art at the time of the invention to process database creation commands, since database creation is a standard database transaction provided for in database management systems.

27.   Regarding claims 3 and 13, **Rierden et al.** teaches a method and system further comprising receiving subsequent database request containing the database identifier, using the database identifier to determine the assigned database server, and providing the subsequent database request to the assigned database server for handling the subsequent database request (see extensive disclosure of the operation of the X-Ref Servers, including the server table and XRef Data tables, col. 8, line 32 through col. 16, line 62; see also example disclosed at col. 28, lines 16-63).

Response to Arguments

28.   Applicant's arguments filed 22 October 2004 have been fully considered but they are not persuasive.

29.   In response to the Applicants' argument that the **Rierden et al.** reference teaches a conventional system with an intermediate server, the examiner respectfully responds that in the rejections of record, the claimed request handler is embodied by the DDS of **Rierden et al.**, and the 'providing information regarding the assigned database server to the request handler' limitation is accomplished through the provision of said information from the X-Ref Servers to the DDS, as disclosed at col. 28, lines 16-63, and particularly at lines 47-51.

The examiner maintains the rejections.

Conclusion

30.   The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Rutkowski et al. (U.S. Patent 5,826,270) teaches a method for client transaction in a distributed database system.

31.   Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Luke S. Wassum whose telephone number is 571-272-4119. The examiner can normally be reached on Monday-Friday 8:30-5:30, alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John E. Breene can be reached on 571-272-4107. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

In addition, INFORMAL or DRAFT communications may be faxed directly to the examiner at 571-273-4119.

Customer Service for Tech Center 2100 can be reached during regular business hours at (571) 272-2100, or fax (703) 872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Luke S. Wassum
Primary Examiner
Art Unit 2167

lsw
15 February 2005